

CLAIMS

1. An induction coil comprising a plurality of tubular members, each of said tubular members further comprising a plurality of elongate, parallel, electrically conductive strips, each of said strips having a strip length, a strip width and a strip thickness, each of said parallel electrically conductive strips being separated from adjacent parallel strips by a gap having a gap width, wherein said gap width is less than said strip thickness.

2. An induction coil in accordance with claim 1 wherein said gap width is less than 1 millimeter.

3. An induction coil in accordance with claim 1 wherein said electrically conductive strips are rectangular in cross-section.

4. An induction coil comprising a plurality of concentric tubular members, each of said tubular members further comprising a plurality of elongate, parallel, electrically conductive strips, each of said strips having a strip length, a strip width and a strip thickness, each of said parallel electrically conductive strips being separated from adjacent parallel strips by a gap having a gap width, wherein said gap width is less than said strip width and said strip thickness, and wherein at least one electrically conductive strip on one said tubular member is in electrical communication with an electrically conductive strip on a different tubular member.

5. An induction coil in accordance with claim 4 wherein said gap width is less than 1 millimeter.

1 6. An induction coil in accordance with claim 4 wherein said electrically
2 conductive strips are rectangular in cross-section.

3 7. An induction coil in accordance with claim 5 wherein said electrically
4 conductive strips are rectangular in cross-section.

5 8. A method for making an induction coil comprising the steps of:

- 6 (a) presenting first and second sheets of an electrically conductive
7 material having a plurality of electrically conductive strips
8 thereon, each of said strips on said first and second sheet being
9 separated from an adjacent strip by a slot therebetween; then
10 (b) placing said first sheet adjacent said second sheet such that said
11 strips on said first sheet lie within said slots on said second
12 sheet; then
13 (c) rolling said first and second sheets to form a first cylinder
14 having an inner diameter; then
15 (d) forming a second cylinder in accordance with steps (a) – (c)
16 having an outside diameter that is less than said inner diameter
17 of said first cylinder; then
18 (e) disposing said second cylinder within said first cylinder in axial
19 alignment therewith; then

1 (f) forming electrical connections between said conductive strips
2 on said first cylinder and conductive strips on said second
3 cylinder.

4 9. The method of claim 8 further comprising the step of wrapping said second
5 cylinder with at least one layer of glass fiber prior to disposition of said second cylinder
6 within said first cylinder.

7 10. The method of claim 8 further comprising impregnating and encapsulating
8 said first and second cylinders in a resin following step (f).